



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

[Signature]

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,475	12/12/2003	Francis T. McGreevy	24.355	4309
28785	7590	05/16/2007	EXAMINER	
JOHN R LEY, LLC 5299 DTC BLVD, SUITE 610 GREENWOOD VILLAGE, CO 80111			CHANG, SUNRAY	
		ART UNIT	PAPER NUMBER	
		2121		
		MAIL DATE	DELIVERY MODE	
		05/16/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/735,475	MCGREEVY, FRANCIS T.	
	Examiner Sunray Chang	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 February 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3-8,10-20,22-28,32-34,36-39,42-65 and 69-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3-8,10-20,22-28,32-34,36-39,42-65 and 69-72 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

1. This office action is in responsive to the paper filed on February 16, 2007.

Claims 1,3-8,10-20,22-28,32-34,36-39,42-65 and 69-72 are presented for examination.

Claims 1,3-8,10-20,22-28,32-34,36-39,42-65 and 69-72 are rejected.

Claims 2, 9, 21, 29 – 31, 35, 40, 41 and 66 – 68 have been cancelled.

Claims 69 – 72 are newly presented in the response filed on February 16, 2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2121

2. **Claims 1, 3, 4, 8, 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz Peter (U.S. Patent No. 6,175,610 and referred to as **Peter** hereinafter) in view of Alan G. Ellman (U.S. Patent No. 6,652,514 and referred to as **Ellman** hereinafter) and further in view of Carlo Tomasi et al. (U.S. Patent No. 6,710,770 and referred to as **Tomasi** hereinafter).**

Regarding independent claim 1,

Peter teaches,

- Medical technical system [a control unit, Col. 1, lines 49 – 56] having a virtual control panel [a virtual system, Col. 1, line 57 – Col. 2, line 3] for controlling functionality of the medical technical system [medical-technical system, electromechanical components, Col. 1, lines 12 – 17] in response to interrogation of an object interacting with a control panel image [detects the position and/or motion of an appendage of an operator on the projection surface, Col. 1, lines 43 – 49], the virtual control panel comprising:
- a display surface structure having a display surface upon which the control panel image is located [Fig. 10];
- a sensor to interrogate optically contact interaction of the object with the control panel image [Col. 4, lines 1 – 12] at a location on the display surface [detects the position and/or motion of an appendage of an operator on the projection surface, Col. 1, lines 43 – 49] separated from the sensor [Fig. 10] and to supply an interaction signal indicative of contact interaction of the object [Col. 4, lines 1 – 12] with the control panel image [generates a detector output dependent on the detected position and/or motion ... is supplied to a control unit, which controls the system component dependent on the detected movement and/or position, Col. 1, lines , Col. 1, lines 43 – 56]; and medical technical system comprising:

Art Unit: 2121

- a generator controller operative to control functionality [a control unit, Col. 1, lines 49 – 56] of the electrosurgical generator [medical-technical system, electromechanical components, Col. 1, lines 12 – 17], the generator controller receiving the interaction signal [detects the position and/or motion of an appendage of an operator on the projection surface, Col. 1, lines 43 – 49] and controlling functionality of the electrosurgical generator in response to the interaction signal [generates a detector output dependent on the detected position and/or motion ... is supplied to a control unit, which controls the system component dependent on the detected movement and/or position, Col. 1, lines , Col. 1, lines 43 – 56].

Peter teaches a medical technical system.

Ellman teaches an intelligent selection system for **electrosurgical instrument** [title, Abstract] for the purpose of providing an intelligent selection system for operating an electrosurgical instrument for use by a surgeon. [Abstract]

Tomasi teaches a sensor connected to the display surface structure. [Fig. 1A, 1B, 1C] for the purpose of sensing proximity of a stylus or user finger relative to a device to **input** or **transfer** commands and/or data to a system, such sensing relative to a virtual device used to input or transfer commands and/or data and/or other information to a system [Col. 1, lines 25 – 30].

Regarding dependent claim 2,

cancelled

Regarding dependent claim 3,

Peter teaches, a display surface structure having a display surface upon which the control panel image is located [Fig. 10];

Tomasi teaches a sensor connected to the display surface structure. [Fig. 1A, 1B, 1C] for the purpose of sensing proximity of a stylus or user finger relative to a device to **input** or **transfer** commands and/or data to a system, such sensing relative to a virtual device used to input or transfer commands and/or data and/or other information to a system [Col. 1, lines 25 – 30].

Regarding dependent claim 4,

Peter teaches,

- the control panel image is printed and attached to the display surface. [Fig. 10]

Regarding dependent claim 8,

Peter teaches,

- the control panel image is printed and attached to the display surface. [Fig. 10; Col. 4, lines 16 – 21]
- wired connection for delivering output signals. [Fig. 1, 7 and 10; Col. 3, line 63 – Col. 4, line 15]

Ellman teaches an intelligent selection system for **electrosurgical instrument** [title, Abstract] for the purpose of providing an intelligent selection system for operating an electrosurgical instrument for use by a surgeon. [Abstract]

Tomasi teaches

- a wireless communication link. [system/device can be electrically coupled to system by a medium that may include wires or wireless, Col. 6, lines 39 – 41] for the purpose of communication [Col. 6, lines 39 – 41].

Regarding dependent claim 9,

Cancelled.

Regarding dependent claim 16,

Peter teaches,

- the sensor interrogating interaction of the object only within the contact control area of the control panel image. [Fig. 10]
- the control panel image includes a contact control area [four groups of keys, 55 to 58, Fig. 10; Col. 7, lines 1 – 6] and a display area, [a numerical display field 59, Fig. 10; Col. 7, lines 1 – 6]
- the contact control area representing control functionality of the electrosurgical generator, [Col. 5, line 23 – Col. 6, line 9]
- the display area presenting information describing functionality of the electrosurgical generator; [a numerical display field, Col. 7, lines 1 – 6]

Ellman further teaches an electrosurgical generator [Abstract], the contact control area and display area displaying control functionality of the electrosurgical generator. [Fig. 1]

Art Unit: 2121

3. **Claims 5, 6, 7, 17 – 20 and 22 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peter, Ellman, Tomasi and further in view of Kalukapuge T. Perera (U.S. Patent No. 4,867,551, and referred to as Perera hereinafter)**

Regarding dependent claim 5,

Peter teaches,

- project optically the control panel image on the display surface. [Fig. 10]

Ellman teaches,

- the electrosurgical generator includes an exterior housing; [Fig. 1]

Perera teaches,

- the display surface structure is a portion of the housing; [Fig. 1, Col. 3, lines 16 – 32 further see Col. 2, line 10 – Col. 4, line 7] and the virtual control panel further comprises:
 - a projector connected to the display surface structure. [Fig. 1, Col. 3, lines 16 – 32] for the purpose of providing useful displays [Abstract].

Regarding dependent claim 6,

Peter teaches,

- the display surface structure is separate from the housing; [Fig. 7] and
- project optically the control panel image on the display surface. [Fig. 10]

Ellman teaches,

- the electrosurgical generator includes an exterior housing; [Fig. 1]

Perera teaches,

Art Unit: 2121

- the virtual control panel further comprises: a projector connected to the display surface structure. [Fig. 1, Col. 3, lines 16 – 32] for the purpose of providing useful displays [Abstract].

Regarding dependent claim 7,

Perera teaches,

- the display surface structure is attachable to and detached from the housing. [Fig. 2 and 3; compare Fig. 2 and 3, the attachment is different, it is detachable and attachable] for the purpose of providing useful displays [Abstract].

Regarding dependent claim 17,

Peter teaches,

- the sensor interrogating interaction of the object only within the contact control area of the control panel image. [Col. 4, lines 1 – 12; Fig. 10]
- the control panel image includes a contact control area [four groups of keys, 55to 58, Fig. 10; Col. 7, lines 1 – 6] and a display area, [a numerical display field 59, Fig. 10; Col. 7, lines 1 – 6]
- the contact control area representing control functionality of the electrosurgical generator, [Col. 5, line 23 – Col. 6, line 9]
- the display area presenting information describing functionality of the electrosurgical generator; [a numerical display field, Col. 7, lines 1 – 6]

Ellman further teaches an electrosurgical generator [Abstract], the contact control area and display area displaying control functionality of the electrosurgical generator. [Fig. 1]

Perera teaches,

- the virtual control panel further comprises: a projector connected to the display surface structure. [Fig. 1, Col. 3, lines 16 – 32] for the purpose of providing useful displays [Abstract].

Regarding dependent claim 18,

Ellman teaches,

- an electrosurgical generator [Abstract],
- the contact control area and display area displaying control functionality of the electrosurgical generator. [Fig. 1]

Peter teaches,

- the projector is connected to the controller; [31, 34, Fig. 7]
- the controller supplies information signals to the projector indicative of the information describing the functionality of the system; [Fig. 3, 8; Col. 3, lines 44 – 62] and
- the projector receives and responds to the information signals received from the controller to project the information describing functionality of the electrosurgical generator in the display area of the control panel image. [Fig. 3, 8; Col. 3, lines 44 – 62]

Regarding dependent claims 19 and 20,

- the control panel image includes a plurality of different contact control areas each of which represents a different control function of the electrosurgical generator; [see rejections to claim 17 above]
- the sensor optically interrogates interaction of the object with each of the different contact control areas and generates the interaction signal related to interaction of the object with each of the contact control areas; [see rejections to claim 1 above] and
- the generator controller responds to the interaction signal to control different functionality of the electrosurgical generator corresponding to the control function interrogated by interaction of the object with the corresponding contact control area. [see rejections to claim 1 above]

Regarding dependent claim 21,

Cancelled.

Regarding dependent claim 22,

Peter teaches,

- project optically a plurality of different contact control areas of the control panel image on the display surface, each contact area representing a different control function; and wherein:

Tomasi teaches

- the sensor comprises a light source which scans a transmitted light beam over the contact control areas of the control panel image, [Fig. 1A, 1B, 1C, 2A, 2B and 5A, 5B; see more detail in Col. 13, lines 25 – 40 and Col. 15, line 43 – Col. 17, line 40] and

Art Unit: 2121

- a light receptor sensor which receives a received light beam created by reflection of the transmitted light beam from the object; [Fig. 1A, 1B, 1C, 2A, 2B and 5A, 5B] and the virtual control panel further comprises:
- a device controller connected to the light source and the light, receptor sensor, the device controller operatively controlling the light source to scan the transmitted light beam over the contact control areas at a predetermined scanning angle at each instance of time, [Fig. 1A, 1B, 1C, 2A, 2B and 5A, 5B] and
- the device controller operatively determining the interaction of the object with a contact control area based on the scanning angle and the received light beam. [Fig. 1A, 1B, 1C, 2A, 2B and 5A, 5B]

Ellman teaches,

- an electrosurgical generator [Abstract],
- the contact control area and display area displaying control functionality of the electrosurgical generator. [Fig. 1]

Perera teaches,

- the virtual control panel further comprises: a projector connected to the display surface structure. [Fig. 1, Col. 3, lines 16 – 32] for the purpose of providing useful displays [Abstract].

Regarding dependent claim 23,

Tomasi teaches

- the light source delivers pulses of light as the transmitted light beam; [light beam, fan beam, frequency, Col. 17, 1 – 17 and 43 – 57]
- the received light beam is formed by pulses of light which are time shifted relative to the corresponding pulses of the transmitted light beam [light beam, fan beam, frequency, Col. 17, 1 – 17 and 43 – 57] as a result of reflection of the transmitted light beam from the object; [Fig. 1A, 1B, 1C, 2A, 2B and 5A, 5B; see more detail in Col. 13, lines 25 – 40 and Col. 15, line 43 – Col. 17, line 40] and
- the device controller operatively determines an interaction position where the object interacts with a contact control area based on the time shifted of the corresponding pulses of the transmitted and received light beams in addition to the predetermined scanning angle. [Fig. 1A, 1B, 1C, 2A, 2B and 5A, 5B; see more detail in Col. 13, lines 25 – 40 and Col. 15, line 43 – Col. 17, line 40]

Regarding dependent claim 24,

- a projector positioned relative to the display surface structure to project a projection light beam on the display surface to optically create the contact control areas and the display areas of the control panel image on the display surface; [Fig. 1A, 1B, 1C, 2A, 2B and 5A, 5B; see more detail in Col. 13, lines 25 – 40 and Col. 15, line 43 – Col. 17, line 40] and wherein:
- the device controller is operatively connected to the projector to coordinate the location where the projection light beam creates the contact control areas relative to the interaction

Art Unit: 2121

position where the object interacts with the contact control areas of the control panel image.

[Fig. 1A, 1B, 1C, 2A, 2B and 5A, 5B; see more detail in Col. 13, lines 25 – 40 and Col. 15, line 43 – Col. 17, line 40]

4. **Claims 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peter, Ellman, Tomasi and further in view of John E. Durkee (U.S. Patent No. 4,148,019, and referred to as Durkee hereinafter)**

Regarding dependent claim 10,

Peter teaches,

- the control panel image is printed and attached to the display surface. [Fig. 10; Col. 4, lines 16 – 21]
- wired connection for delivering output signals: [Fig. 1, 7 and 10; Col. 3, line 63 – Col. 4, line 15]

Ellman teaches an intelligent selection system for electrosurgical instrument [title, Abstract] for the purpose of providing an intelligent selection system for operating an electrosurgical instrument for use by a surgeon. [Abstract]

Tomasi teaches

- a wireless communication link. [system/device can be electrically coupled to system by a medium that may include wires or wireless, Col. 6, lines 39 – 41] for the purpose of communication [Col. 6, lines 39 – 41].

Durkee teaches,

Art Unit: 2121

- the wireless communication link uses radio frequency electromagnetic waves to communicate the interaction signal from the virtual control panel to the generator controller for the purpose of data transmission [Col. 1, lines 26 – 30].

5. **Claims 11 – 15 are rejected** under 35 U.S.C. 103(a) as being unpatentable over **Peter, Ellman, Tomasi, Perera** and further in view of Paul F. Laeseke et al. (Postbiopsy Bleeding in a Porcine Model: Reduction with Radio-Frequency Ablation – Preliminary Results, RSNA, 05/2003, and referred to as **Laeseke** hereinafter)

Peter teaches,

- project optically the control panel image on the display surface. [Fig. 10]

Ellman teaches,

- the electrosurgical generator includes an exterior housing; [Fig. 1]

Perera teaches,

- the display surface structure is a portion of the housing; [Fig. 1, Col. 3, lines 16 – 32 further see Col. 2, line 10 – Col. 4, line 7] and the virtual control panel further comprises:
- a projector connected to the display surface structure. [Fig. 1, Col. 3, lines 16 – 32] for the purpose of providing useful displays [Abstract].

Laeseke teaches,

The display surface structure, sensor and projector are sterilizable, disposable after usage.

[the materials used in the device must be biocompatible, sterilizable, disposable, and relatively inexpensive, Materials and Methods, col. 1, page 494; see more in Col. 2, page 494] for a standard feature in operating rooms [col. 3, discussion, page 496]

Art Unit: 2121

6. **Claims 25 – 28** have been examined, yet, are **not** in the condition for allowance, having been rejected for the same reason indicated above listed in the rejections to claims 1, 3 – 20 and 22 – 24. The limitations in claims 25 – 28 have a “virtual pad” in addition to the “virtual control panel” can be treated as dual “virtual control panels”. The **Peter** reference discloses two projection surfaces in Fig. 7, which can be treated as a “virtual pad” and a “virtual control panel”.

7. **Claims 29 – 31** have been cancelled.

8. **Claims 32 – 33** have been examined, with two more structure limitation that the pad display has a hood and a base piece connected to. The examiner further cites a reference Satwinder D. S. Malhi (U.S. Patent No. 6,040,811) can be used to combine with **Peter, Ellman, Tomasi and Perera**, teaches a over head hood [Fig. 5 and Fig. 10] and side hoods [Fig. 4, 5 and Fig. 11] can be used to shield the pad panel image from ambient light; a base piece connected to the pad display to support the pad at an angle relative to a horizontal reference [Fig. 10 and 11]; a self-contained power supply connected to base piece to supply power. [battery cell, Col. 1, lines 46 – 47] for the purpose of providing the user with privacy providing an additional advantage. [Col. 6, lines 7 – 12]

9. Claims 34, 36 – 39, 42 – 65 and 69 – 72, have been examined, yet, having been rejected for the same reason listed in the rejections to claims 1, 3 – 8, 10 – 20, 22 – 28, 32 and 33, indicated above.

Response to Amendment

Claim Rejections - 35 USC § 102

10. Applicants' arguments regarding "contact" interrogation with the image on the display surface which is disagreed with. **Peter** teaches "located on" is also "optically contact" exact the same like the claimed limitation.

11. Applicants' arguments regarding claims 22 – 33, 58 – 65 and 68 have been rejected using no understandable rejection. The examiner has more detail rejection listed in current office action and withdraws the forth rejections.

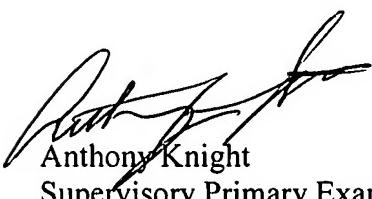
12. Regarding the limitation, " **Peter** fails to disclose an electrosurgical generator", the examiner has with drawn the forth rejection and cites new references to be combined with **Peter** to make a new set of rejections as indicated in current office action.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunray Chang who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. via telephone number (571) 272-3682 or facsimile transmission (571) 273-3682 or email sunray.chang@uspto.gov.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687.

The official facsimile transmission number for the organization where this application or proceeding is assigned is (571) 273-8300.



Anthony Knight
Supervisory Primary Examiner
Group Art Unit 2121
Technology Center 2100
U.S. Patent and Trademark Office

May 7, 2007